Claims

What is claimed is:

1. A coated optical fiber comprising:

a silica cladding; and

a coating applied to said cladding to provide said coated optical fiber having a diameter from about 120 microns to about 150 microns, said coated optical fiber further having a relative frequency distribution of at least about 85% for dynamic fatigue measurements between about 49.2×10^3 kg/cm^2 and about 63.3×10^3 kg/cm^2.

2. The coated optical fiber of claim 1 wherein said relative frequency distribution is at least about 90%.

3. The coated optical fiber of claim 1, wherein said diameter is from about 128 microns to about 135 microns and said relative frequency distribution is at least about 95%.

4. The coated optical fiber of claim 1, wherein said coated optical fiber further includes an optical fiber core covered by said silica cladding.

5. The coated optical fiber of claim 4, wherein said optical fiber core and said silica cladding provide a silica clad core having a diameter from about 65 microns to about 100 microns.

6. The coated optical fiber of claim 5, wherein said silica clad core has a diameter from about 80 microns to about 90 microns.

7. The coated optical fiber of claim 5, wherein said coating is a polymeric coating.

8. The coated optical fiber of claim 7, wherein said polymeric coating comprises a first layer in contact with a second layer.

9. The coated optical fiber of claim 7, wherein said polymeric coating forms by curing of a coating composition that contains a cationic photoinitiator.

10. The coated optical fiber of claim 9, wherein said cationic photoinitiator is a diaryl iodonium salt having a diaryliodonium cation and an anion selected from the group consisting of hexafluoroantimonates, and methide anions having a general formula $(R_fSO_2)_3C^-$.

11. The coated optical fiber of claim 10, wherein said general formula $(R_fSO_2)_3C^-$ is selected from the group consisting of $(CF_3SO_2)_3C^-$, $(C_4F_9SO_2)_3C^-$, and $(C_8F_{17}SO_2)_3C^-$, and the like.

12. A GGP optical fiber comprising:

an optical fiber core;

a silica cladding over said optical fiber core, to provide a silica clad core; and

a permanent polymeric coating applied to said cladding by exposure to actinic radiation of a photocurable composition containing a photoinitiator, said GGP optical fiber having a diameter from about 120 microns to about 150 microns, said GGP optical fiber further having a relative frequency distribution of at least about 85% for dynamic fatigue measurements between about 49.2×10^3 kg/cm^2 and about 63.3×10^3 kg/cm^2.

13. The GGP optical fiber of claim 12, wherein said relative frequency distribution is at least about 90%.

14. The GGP optical fiber of claim 13, wherein said diameter is from about 128 microns to about 135 microns and said relative frequency distribution is at least about 95%.

15. The GGP optical fiber of claim 12, wherein said silica clad core has a diameter from about 65 microns to about 100 microns.

16. The GGP optical fiber of claim 15, wherein said silica clad core has a diameter from about 80 microns to about 90 microns.

17. The GGP optical fiber of claim 12, wherein said permanent polymeric coating has a thickness from about 10 microns to about 25 microns.

18. The GGP optical fiber of claim 17, wherein said permanent polymeric coating has a thickness from about 20 microns to about 23 microns.

19. The GGP optical fiber of claim 12, wherein said photoinitiator comprises a diaryl iodonium salt having a diaryliodonium cation and an anion selected from the group consisting of hexafluoroantimonates, and methide anions having a general formula $(R_fSO_2)_3C^-$.

20. The GGP optical fiber of claim 19, wherein said general formula $(R_fSO_2)_3C^-$ is selected from the group consisting of $(CF_3SO_2)_3C^-$, $(C_4F_9SO_2)_3C^-$, and $(C_8F_{17}SO_2)_3C^-$, and the like.